

**What is claimed is:**

1. An optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and a protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film, and at least either one of a linear expansion coefficient and a Young's modulus of the protective film is greater than that of the transparent substrate, the linear expansion coefficient of the protective film being greater than  $7.0 \times 10^{-5}$  ( $1/^{\circ}\text{C}$ ) and smaller than  $5.0 \times 10^{-4}$  ( $1/^{\circ}\text{C}$ ).
2. An optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and a protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film, and at least either one of a linear expansion coefficient and a Young's modulus of the protective film is greater than that of the transparent substrate, the Young's modulus of the protective

film being greater than  $2.0 \times 10^9$ (Pa) and smaller than  $1.0 \times 10^{10}$ (Pa).

3. An optical data recording medium according to any  
5 one of claims 1 and 2, wherein a thickness of the protective film is 5  $\mu\text{m}$  or more to 20  $\mu\text{m}$  or less.

4. An optical data recording medium according to claim 1,  
10 wherein the linear expansion coefficient of the protective film is 1.5 to 3 times as great as that of the transparent substrate, the linear expansion coefficient being greater than  $1.0 \times 10^{-4}$  ( $1/^\circ\text{C}$ ) and smaller than  $2.0 \times 10^{-4}$  ( $1/^\circ\text{C}$ ).

5. An optical data recording medium according to any  
15 one of claims 1 and 2, wherein the transparent substrate is made of a polycarbonate or a polyolefin and a thickness thereof is about 0.5 mm.

6. An optical data recording medium according to any  
20 one of claims 1 and 2, wherein the protective film is made of an ultraviolet light curing resin.

7. A method of selecting a protective film in an optical  
data recording medium, the optical data recording medium  
25 comprising a transparent substrate, a thin film layer formed on

the transparent substrate and the protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein, on condition that the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film and the transparent substrate is made of a polycarbonate or a polyolefin with a thickness of 0.5 mm, the protective film is selected such that at least either one of a linear expansion coefficient and a Young's modulus of the protective film is greater than that of the transparent substrate and the linear expansion coefficient of the protective film is greater than  $7.0 \times 10^{-5}$  (1/°C) and smaller than  $5.0 \times 10^{-4}$  (1/°C).

8. A method of selecting a protective film in an optical data recording medium, the optical data recording medium comprising a transparent substrate, a thin film layer formed on the transparent substrate and the protective film which is mainly comprised of a resin and formed on the thin film layer for protecting the thin film layer, wherein, on condition that the thin film layer is a single layered or multilayered film including at least any one of a dielectric film, a recording film and a reflective film and the transparent substrate is made of a polycarbonate or a polyolefin with a thickness of 0.5 mm, the protective film is selected such that at least either one of a linear expansion coefficient and a Young's modulus of the

protective film is greater than that of the transparent substrate and the Young's modulus of the protective film is greater than  $2.0 \times 10^9(\text{Pa})$  and smaller than  $1.0 \times 10^{10}(\text{Pa})$ .

- 5 9. An optical data recording medium provided with a protective film for protecting a thin film layer selected by the method of claim 7 or 8.

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